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TITLE: MANUFACTURE OF SEMICONDUCTOR DEVICE

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INVENTOR-INFORMATION:

NAME

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N/A

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ABSTRACT:

PURPOSE: To improve hot carrier resistance without a gate electrode thinning during oxidation, acceleration, and diffusion processing by implanting the impurities of opposite conductivity type into high concentration with a metal silicide film, a gate electrode, and a sidewall as masks, and diffusing them so as to form a source and a drain.

CONSTITUTION: A film 4 of high melting point metal such as titanium, or the like is stacked on the surface of a gate electrode 3. Next, by heat treatment, a titanium film 4 and the polysilicon of a gate electrode 3 are reacted on each other to form a titanium silicide film 5, and further oxidation treatment is applied to form a silicon oxide film 7 at the surface of a silicon substrate 1. With the gate electrode 3 and the titanium film 5 as masks, phosphorous ions are implanted. Next, the phosphorous ions implanted by the annealing in oxygen atmosphere are oxidated, accelerated, and diffused to form n<SP>-</SP> layers 8 and 9. Next, a sidewall 11 is formed at the side of the gate electrode 4, and then arsenic ions are implanted to form a source 12 and a drain

13 consisting
of n<SP>+</SP> layers continuous from the n<SP>-</SP> layers 8
and 9.

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